

AN 1988:191186 HCAPLUS  
 DN 108:191186  
 TI Copper alloy **wires** for bonding of semiconductors  
 IN Tanigawa, Toru; Shiga, Shoji; Kurihara, Masaaki  
 PA Furukawa Electric Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62116743	A2	19870528	JP 1985-255277	19851114
PRAI	JP 1985-255277		19851114		

AB The Cu alloy for **wires** contains Ti 0.0005-0.2% and .gtoreq.1 of Mg, Fe, Ni, Cr, Si, Co, Mn, Al, B, and Zr 0.0005-0.2% (total), optionally with Zn, Sn, Ca, Be, Y, and/or rare-earth metals for .ltoreq.0.2% total. The fine **wires** form a ball tip with a hardness close to that of Au and a round shape show good bonding to inner **lead** frames and can be manufd. at low cost. Thus, molten Cu of 99.997% purity was alloyed to contain 0.051 Ti and 0.0006% Fe, and cast into a billet of 25 mm diam. The billet was alternately cold-rolled and annealed at 300.degree. in vacuum to give a rod of 8 mm diam. The trimmed rod was alternately drawn with draft 50% and annealed in vacuum at 300.degree. to give a bonding **wire** of 25 .mu. diam. The **wire** showed tensile strength of 9 g, and a good ball shape before and after a bonding test, vs. 4 g and a bad shape after bonding with a Cu **wire**.